INDEX TO AUTHORS

A

Albanese, Anthony A., and **Irby, Virginia.** Determination of urinary amino nitrogen by the copper method, 583

Andersch, Marie A., Wilson, Donald A., and **Menten, Maud L.** Sedimentation constants and electrophoretic mobilities of adult and fetal carbonylhemoglobin, 301

B

Badger, Elizabeth. The structural specificity of choline for the growth of Type III pneumococcus, 183

Bain, J. A., and **Rusch, H. P.** A method for the assay of ribonucleinase in biological material, 659

Ballou, Gerald A., Boyer, Paul D., Luck, James Murray, and **Lum, Funston G.** The heat coagulation of human serum albumin, 589

Balls, A. K., and **Kies, Marian W.** Concerning the mode of action of lipoxidase, 337

Barnard, Robert D. The ionic strength valence of ferrohemoglobin, 91

Barnes, Richard H. See *Lundberg, Barnes, Clausen, and Burr*, 265

Bergmann, Max. See *Smith and Bergmann*, 627

Berman, Alvin L. See *Wikoff, Kaplan, and Berman*, 227

Bernheim, Frederick, and **Bernheim, Mary L. C.** The metabolism of tyramine, *l*-tyrosine, and phenol by rat tissues *in vitro*, 369

Bernheim, Mary L. C. See *Bernheim and Bernheim*, 369

Binkley, Francis, Wood, John L., and **du Vigneaud, Vincent.** A study of the acetylation *in vivo* of certain *d*-amino acids, 495

Bischoff, Fritz. Denaturation of the gonadotropins by urea, 31

Bovarnick, Marianna R. Isolation of the nicotinamide formed from asparagine and glutamic acid, 1

Boxer, George E., and **Stetten, DeWitt, Jr.** The effect of dietary choline upon the rate of turnover of phosphatide choline, 617

— and —. The rôle of thiamine in the synthesis of fatty acids from carbohydrate precursors, 607

Boyd, Eldon M., Jackson, Shirley, MacLachlan, Marion, Palmer, Betty, Stevens, Mary, and **Whittaker, Joan.** The lipid, sodium, chloride, and nitrogen content of normal respiratory tract fluid, 435

Boyer, Paul D. See *Ballou, Boyer, Luck, and Lum*, 589

Briggs, G. M., Jr., Luckey, T. D., Elvehjem, C. A., and **Hart, E. B.** Further studies on vitamins B_{10} and B_{11} and their relation to "folic acid" activity, 423

Burr, George O. See *Lundberg, Barnes, Clausen, and Burr*, 265

Butler, Allan M. See *Talbot, Butler, Saltzman, and Rodriguez*, 479

C

Carruthers, Christopher. See *Suntzeff and Carruthers*, 521

Cartwright, George E., Wintrobe, Maxwell M., and **Humphreys, Stewart.** Studies on anemia in swine due to pyridoxine deficiency, together with data on phenylhydrazine anemia, 171

Chaikoff, I. L. See *Franklin, Chaikoff, and Lerner*, 151

Chesler, Annette, Homburger, Edmund, and **Himwich, Harold E.** Carbohydrate metabolism in vitamin B_1 deficiency, 219

Clausen, Marion. See *Lundberg, Barnes, Clausen, and Burr*, 265

Cone, William H. See *Winnick, Cone, and Greenberg*, 465

D

Deulofeu, V., and **Duprat, Enrique.** The basic constituents of the venom of some South American toads, 459

Doherty, David G. See *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link,* 5

Duprat, Enrique. See *Deulofeu and Duprat,* 459

Dziewiatkowski, Dominic D., and **Lewis, Howard B.** Glucuronic acid synthesis and the glycogen content of the liver of the rat, 49

E

Elvehjem, C. A. See *Briggs, Luckey, Elvehjem, and Hart,* 423

F

Ferris, Shirley. See *Chesler, Homburger, and Himwich,* 219

Field, John, 2nd. See *Fuhrman and Field,* 515

Flexner, Louis B. See *Merrell, Gellhorn, and Flexner,* 83

Floyd, Norman F. See *Weinhouse, Medes, and Floyd,* 689

Flusser, Bertrand A. See *Robinson and Flusser,* 529

Fox, R. Phyllis. See *Kochakian and Fox,* 669

Franklin, A. L., Chaikoff, I. L., and **Lerner, S. R.** The influence of goitrogenic substances on the conversion *in vitro* of inorganic iodide to thyroxine and diiodotyrosine by thyroid tissue with radioactive iodine as indicator, 151

Fuhrman, Frederick A., and **Field, John, 2nd.** The use of low environmental temperature during the preparation of tissue slices for respiration studies *in vitro,* 515

G

Gellhorn, Alfred. See *Merrell, Gellhorn, and Flexner,* 83

Gould, R. Gordon. Glutathione as an essential growth factor for certain strains of *Neisseria gonorrhoeae,* 143

Graf, Lloyd. See *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link,* 5

Green, D. E. See *Johnson, Green, and Pauli,* 37

—. See *Stumpf and Green,* 387

Green, Mary H. See *Menten, Junge, and Green,* 471

Greenberg, David M. See *Winnick, Cone, and Greenberg,* 465

H

Hack, Marvin. See *Klein,* 295

Hart, E. B. See *Briggs, Luckey, Elvehjem, and Hart,* 423

Hegsted, D. Mark, and **Wardwell, Eunice D.** On the purity of synthetic *dl*-leucine, 167

Hendricks, Russel H. See *Thomas and Hendricks,* 313

Heyroth, Francis F. See *Machle, Heyroth, and Witherup,* 551

Himwich, Harold E. See *Chesler, Homburger, and Himwich,* 219

Homburger, Edmund. See *Chesler, Homburger, and Himwich,* 219

Huebner, Charles Ferdinand. See *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link,* 5

Humphreys, Stewart. See *Cartwright, Wintrobe, and Humphreys,* 171

I

Ikawa, Miyoshi. See *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link,* 5

Ingalls, Elizabeth N. See *Wyman, Rafferty, and Ingalls,* 275

Irby, Virginia. See *Albanese and Irby,* 583

Irvin, J. Logan, Johnston, Charles G., and **Kopala, Joseph.** A photometric method for the determination of cholates in bile and blood, 439

J

Jackson, Shirley. See *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker,* 435

Johnson, Oscar H., Green, D. E., and Pauli, Ruth. The antibacterial action of derivatives and analogues of *p*-aminobenzoic acid, 37
Johnson, R. E. See *Sargent, Robinson, and Johnson,* 285
Johnston, Charles G. See *Irvin, Johnston, and Kopala,* 439
Junge, Josephine. See *Menten, Junge, and Green,* 471

K

Kalckar, Herman M. Adenylpyrophosphatase and myokinase, 355
Kaplan, Joseph M. See *Wikoff, Kaplan, and Berman,* 227
Keevil, N. B. See *Patterson, Keevil, and McHenry,* 489
Keston, Albert S. The Schardinger enzyme in biological iodinations, 335
Kies, Marian W. See *Balls and Kies,* 337
Kimball, Grace C. See *Chesler, Homburger, and Himwich,* 219
Klein, J. Raymond. Oxidation of fructose by brain *in vitro,* 295
Kochakian, Charles D., and Fox, R. Phyllis. The effect of castration and testosterone propionate on the "alkaline" and "acid" phosphatases of the kidney, liver, and intestine of the mouse, 669
Kopala, Joseph. See *Irvin, Johnston, and Kopala,* 439
Kratzer, F. H. Amino acid absorption and utilization in the chick, 237

L

Lampen, J. O., and Peterson, W. H. The determination of *p*-aminobenzoic acid by assay with *Clostridium acetobutylicum,* 193
Leathem, James H. See *Moore, Levin, and Leathem,* 349
Lehninger, Albert L. The synthesis, some derivatives, and the metabolism of α,γ-diketo-*n*-octanoic acid, 561
Leloir, Luis F., and Muñoz, Juan M. Butyrate oxidation by liver enzymes, 53
Lerner, S. R. See *Franklin, Chaikoff, and Lerner,* 151
Levin, Louis. See *Moore, Levin, and Leathem,* 349
Lewis, Howard B. Russell Henry Chittenden, 339
—. See *Dziewiatkowski and Lewis,* 49
—. See *Louis and Lewis,* 381
Link, Karl Paul. See *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link,* 5
Lipmann, Fritz, and Tuttle, L. Constance. Acetyl phosphate: chemistry, determination, and synthesis, 571
Loring, Hubert S., and Pierce, John G. Pyrimidine nucleosides and nucleotides as growth factors for mutant strains of *Neurospora,* 61
Louis, Lawrence, and Lewis, Howard B. The composition of the tissue proteins of the rabbit as influenced by inanition and the hepatotoxic agents, hydrazine and phosphorus, 381
Luck, James Murray. See *Ballou, Boyer, Luck, and Lum,* 589
Luckey, T. D. See *Briggs, Luckey, Elvehjem, and Hart,* 423
Luecke, R. W., and Pearson, P. B. The microbiological determination of free choline in plasma and urine, 259
Lum, Funston G. See *Ballou, Boyer, Luck, and Lum,* 589
Lundberg, W. O., Barnes, Richard H., Clausen, Marion, and Burr, George O. The deposition and storage of α-tocopherol in abdominal fats, 265

M

MacFadyen, Douglas A. Determination of ammonia evolved from α-amino acids by ninhydrin, 507
Machle, Willard, Heyroth, Francis F., and Witherup, Sylvan. The fate of methylcellulose in the human digestive tract, 551
MacLachlan, Marion. See *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker,* 435
McHenry, E. W. *See Patterson, Keevil, and McHenry,* 489

McMahan, J. Raymond. An improved short time turbidimetric assay for penicillin, 249

Medes, Grace. *See Weinhouse, Medes, and Floyd,* 689

Menten, Maud L., Junge, Josephine, and **Green, Mary H.** A coupling histochemical azo dye test for alkaline phosphatase in the kidney, 471

—. See *Andersch, Wilson, and Menten,* 301

Merrell, Margaret, Gellhorn, Alfred, and **Flexner, Louis B.** Studies on rates of exchange of substances between the blood and extravascular fluid. II. The exchange of sodium in the guinea pig, 83

Moore, Dan H., Levin, Louis, and **Leathem, James H.** The α-globulin fraction of the serum of normal and hypophysectomized rats, 349

—. See *Ziff and Moore,* 653

Muñoz, Juan M. See *Leloir and Muñoz,* 53

N

Nelson, Norton. A photometric adaptation of the Somogyi method for the determination of glucose, 375

O

Olcott, Harold S. A method for the determination of glutamic acid in proteins, 71

Overman, Ralph S., Stahmann, Mark Arnold, Huebner, Charles Ferdinand, Sullivan, William R., Spero, Leonard, Doherty, David G., Ikawa, Miyoshi, Graf, Lloyd, Roseman, Saul, and **Link, Karl Paul.** Studies on the hemorrhagic sweet clover disease. XIII. Anticoagulant activity and structure in the 4-hydroxycoumarin group, 5

P

Palmer, Betty. See *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker,* 435

Pangborn, Mary C. Acid cardiolipin and an improved method for the preparation of cardiolipin from beef heart, 343

Patterson, Jean M., Keevil, N. B., and **McHenry, E. W.** Choline and the prevention of hemorrhagic kidneys in the rat. II. Phospholipid turnover determined with radioactive phosphorus, 489

Pauli, Ruth. See *Johnson, Green, and Pauli,* 37

Pearson, P. B. See *Luecke and Pearson,* 259

Peterson, W. H. See *Lampen and Peterson,* 193

Pierce, John G. See *Loring and Pierce,* 61

Plentl, Albert A., and **Schoenheimer, Rudolf.** Studies in the metabolism of purines and pyrimidines by means of isotopic nitrogen, 203

Pucher, George W. A microtitration method for the determination of small amounts of citric acid, 133

R

Rafferty, J. A. See *Wyman, Rafferty, and Ingalls,* 275

Riley, Richard F. Metabolism of phosphorylcholine. II. Partition of phosphorylcholine phosphorus between blood phosphate fractions. III. Partition of phosphorylcholine phosphorus between tissues. IV. Distribution of phosphorylcholine phosphorus in tissue lipids, 535

Rittenberg, D. See *Shemin and Rittenberg,* 401

Robinson, Eugene S., and **Flusser, Bertrand A.** Studies on pyrogens. I. The isolation of pyrogens from various microorganisms, 529

Robinson, P. See *Sargent, Robinson, and Johnson,* 285

Rodriguez, P. M. See *Talbot, Butler, Saltzman, and Rodriguez,* 479

Roseman, Saul. See *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link,* 5

Rusch, H. P. See *Bain and Rusch,* 659

S

Saltzman, A. H. See *Talbot, Butler, Saltzman, and Rodriguez,* 479

Sargent, F., Robinson, P., and **Johnson, R. E.** Water-soluble vitamins in sweat, 285

Schaffer, Norwood K. The determination of uric acid in urine with crude uricase, 163

Schenck, Jay R., and **du Vigneaud, Vincent.** A study of the synthesis of β-alanine in the white rat, 501

Schoenheimer, Rudolf. See *Plentl and Schoenheimer,* 203

—. See *Stetten and Schoenheimer,* 113

Shemin, David, and **Rittenberg, D.** Some interrelationships in general nitrogen metabolism, 401

Shimer, Stanley R. See *Teeri and Shimer,* 307

Smith, Emil L., and **Bergmann, Max.** The peptidases of intestinal mucosa, 627

Spero, Leonard. See *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link,* 5

Sprince, Herbert. *See Woolley and Sprince,* 687

Stahmann, Mark Arnold. See *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link,* 5

Steiger, Robert E. N-Hydroxy-α-amino acids as possible intermediates in the oxidative degradation of α-amino acids, 691

Stetten, DeWitt, Jr. See *Boxer and Stetten,* 607, 617

Stetten, Marjorie Roloff, and **Schoenheimer, Rudolf.** The metabolism of *l*(−)-proline studied with the aid of deuterium and isotopic nitrogen, 113

Stevens, Mary. See *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker,* 435

Stimmel, Benjamin F. A quantitative study of the adsorption of estrone, estriol, and α-estradiol on a chromatographic column, 327

Stumpf, P. K., and **Green, D. E.** *l*-Amino acid oxidase of *Proteus vulgaris,* 387

Sullivan, William R. See *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link,* 5

Sunderman, F. William. A rapid method for estimating serum proteins. Formula for calculating serum protein concentration from the refractive index of serum, 139

Suntzeff, V., and **Carruthers, Christopher.** Potassium and calcium in epidermal carcinogenesis induced by methylcholanthrene, 521

T

Talbot, Nathan B., Butler, Allan M., Saltzman, A. H., and **Rodriguez, P. M.** The colorimetric estimation of protein-bound serum iodine, 479

Taylor, A. R. Chemical analysis of the influenza viruses A (PR8 strain) and B (Lee strain) and the swine influenza virus, 675

Teeri, Arthur E., and **Shimer, Stanley R.** A colorimetric determination of nicotinic acid, 307

Thomas, Moyer D., and **Hendricks, Russel H.** The hydrolysis of cystine and the fractionation of sulfur in plant tissues, 313

Tuttle, L. Constance. See *Lipmann and Tuttle,* 571

V

du Vigneaud, Vincent. See *Binkley, Wood, and du Vigneaud,* 495

—. See *Schenck and du Vigneaud,* 501

W

Wardwell, Eunice D. See *Hegsted and Wardwell,* 167

Weinhouse, Sidney, Medes, Grace, and **Floyd, Norman F.** The mechanism of fatty acid oxidation, 689

Whittaker, Joan. See *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker,* 435

Wikoff, Helen L., Kaplan, Joseph M., and Berman, Alvin L. The occurrence of some previously unreported fatty acids in peanut oil, 227

Wilson, Donald A. See *Andersch, Wilson, and Menten*, 301

Winnick, Theodore, Cone, William H., and Greenberg, David M. Experiments on the activation of ficin, 465

Wintrobe, Maxwell M. See *Cartwright, Wintrobe, and Humphreys*, 171

Witherup, Sylvan. See *Machle, Heyroth, and Witherup*, 551

Wood, John L. See *Binkley, Wood, and du Vigneaud*, 495

Woolley, D. W., and Sprince, Herbert. Identification of folic acid as one of the unknown dietary essentials for guinea pigs, 687

Wyman, Jeffries, Jr., Rafferty, J. A., and Ingalls, Elizabeth N. Solubility of adult and fetal carbonylhemoglobin of the cow, 275

Z

Ziff, Morris. Reversible inactivation of adenosinetriphosphatase, 25

— and **Moore, Dan H.** Electrophoresis, sedimentation, and adenosinetriphosphatase activity of myosin, 653

INDEX TO SUBJECTS

A

Acetyl phosphate: Chemical constitution, *Lipmann and Tuttle*, 571
Determination, *Lipmann and Tuttle*, 571
Synthesis, *Lipmann and Tuttle*, 571
Adenosinetriphosphatase: Inactivation, reversible, *Ziff*, 25
Myosin, *Ziff and Moore*, 653
Adenylpyrophosphatase: Myokinase and, relation, *Kalckar*, 355
Alanine: β-, synthesis, rat, *Schenck and du Vigneaud*, 501
Albumin: Blood serum, coagulation, heat, *Ballou, Boyer, Luck, and Lum*, 589
Amino acid(s): α-, ammonia determination, ninhydrin use, *MacFadyen*, 507
Absorption, chick, *Kratzer*, 237
d-, acetylation *in vivo*, *Binkley, Wood, and du Vigneaud*, 495
N-Hydroxy-α-, α-amino acid degradation, *Steiger*, 691
l-, oxidase, *Proteus vulgaris*, *Stumpf and Green*, 387
Utilization, chick, *Kratzer*, 237
Aminobenzoic acid: *p*-, derivatives and analogues, antibacterial action, *Johnson, Green, and Pauli*, 37
—, determination, *Clostridium acetobutylicum* use, *Lampen and Peterson*, 193
Amino nitrogen: Urine, determination, copper method, *Albanese and Irby*, 583
Ammonia: α-Amino acids, determination, ninhydrin use, *MacFadyen*, 507
Anemia: Phenylhydrazine, *Cartwright, Wintrobe, and Humphreys*, 171
Pyridoxine deficiency, *Cartwright, Wintrobe, and Humphreys*, 171
Asparagine: Nicotinamide isolation, *Bovarnick*, 1

B

Bacteria: *p*-Aminobenzoic acid action, *Johnson, Green, and Pauli*, 37
Bacterium: *See also Clostridium, Proteus vulgaris*
Bile: Cholate determination, photometric, *Irvin, Johnston, and Kopala*, 439
Blood: Cholate determination, photometric, *Irvin, Johnston, and Kopala*, 439
Coagulation, 4-hydroxycoumarin group, effect, *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link*, 5
Extravascular fluid and, exchange rates, *Merrell, Gellhorn, and Flexner*, 83
Sodium, extravascular fluid and, exchange, *Merrell, Gellhorn, and Flexner*, 83
Blood plasma: Choline determination, microbiological, *Luecke and Pearson*, 259
Blood serum: Albumin, coagulation, heat, *Ballou, Boyer, Luck, and Lum*, 589
α-Globulin, normal and hypophysectomized rats, *Moore, Levin, and Leathem*, 349
Iodine, protein-bound, determination, colorimetric, *Talbot, Butler, Saltzman, and Rodriguez*, 479
Proteins, determination, refractive index use, *Sunderman*, 139
Brain: Fructose oxidation, *in vitro*, *Klein*, 295
Butyrate: Oxidation, liver enzymes, *Leloir and Muñoz*, 53

C

Calcium: Carcinogenesis, epidermal, methylcholanthrene-induced, *Suntzeff and Carruthers*, 521
Carbohydrate(s): Metabolism, vitamin B_1 deficiency, effect, *Chesler, Homburger, and Himwich*, 219
Precursors, fatty acid synthesis from, thiamine effect, *Bozer and Stetten*, 607

Carbonylhemoglobin: Adult and fetal, sedimentation constants and electrophoretic mobilities, *Andersch, Wilson, and Menten*, 301
— — —, solubility, *Wyman, Rafferty, and Ingalls*, 275
Carcinogenesis: Epidermal, methylcholanthrene-induced, potassium and calcium, *Suntzeff and Carruthers*, 521
Cardiolipin: Acid, preparation and properties, *Pangborn*, 343
Castration: Phosphatase, kidney, liver, and intestine, effect, *Kochakian and Fox*, 669
Cellulose: Methyl-, digestive tract, fate, *Machle, Heyroth, and Witherup*, 551
Chittenden, Russell Henry: Obituary, *Lewis*, 339
Chloride: Respiratory tract fluid, *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker*, 435
Cholanthrene: Methyl-, carcinogenesis from, epidermal, potassium and calcium, *Suntzeff and Carruthers*, 521
Cholate(s): Bile, determination, photometric, *Irvin, Johnston, and Kopala*, 439
Blood, determination, photometric, *Irvin, Johnston, and Kopala*, 439
Choline: Blood plasma, determination, microbiological, *Luecke and Pearson*, 259
Dietary, phosphatide choline turnover, effect, *Bozer and Stetten*, 617
Kidney hemorrhage, effect, *Patterson, Keevil, and McHenry*, 489
Phosphatide, turnover, dietary choline effect, *Bozer and Stetten*, 617
Phosphoryl-, metabolism, *Riley*, 535
Pneumococcus growth, effect, *Badger*, 183
Urine, determination, microbiological, *Luecke and Pearson*, 259
Citric acid: Determination, micro-, titration, *Pucher*, 133
Clostridium acetobutylicum: *p*-Aminobenzoic acid determination, use, *Lampen and Peterson*, 193
Clover: Sweet, hemorrhagic disease, *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link*, 5
Coagulation: Blood, 4-hydroxycoumarin group, effect, *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link* 5
— serum albumin, heat effect, *Ballou, Boyer, Luck, and Lum*, 589
Copper: Urine amino nitrogen determination, use, *Albanese and Irby*, 583
Coumarin: 4-Hydroxy-, group, anticoagulant, activity and chemical constitution, *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link*, 5
Cystine: Plant tissue, hydrolysis, *Thomas and Hendricks*, 313

D

Deuterium: *l*(−)-Proline metabolism study with, *Stetten and Schoenheimer*, 113
Digestive tract: Methylcellulose fate, *Machle, Heyroth, and Witherup*, 551
Diiodotyrosine: Iodide, inorganic, conversion from, *in vitro*, goitrogenic substances, effect, radioactive iodine as indicator, *Franklin, Chaikoff, and Lerner*, 151
Diketo-*n*-octanoic acid: α,γ-, derivatives, synthesis and metabolism, *Lehninger*, 561
—, metabolism, *Lehninger*, 561
—, synthesis, *Lehninger*, 561
Dye: Azo, kidney phosphatase, test, *Menten, Junge, and Green*, 471

E

Enzyme(s): Liver, butyrate oxidation, *Leloir and Muñoz*, 53
Schardinger, iodination, biological, *Keston*, 335
See also Adenosinetriphosphatase, Adenylpyrophosphatase, Ficin, Lipoxidase, Myokinase, Oxidase, Peptidase, Phosphatase, Ribonucleinase, Uricase

Estradiol: α-, adsorption, chromatographic, *Stimmel*, 327
Estriol: Adsorption, chromatographic, *Stimmel*, 327
Estrone: Adsorption, chromatographic, *Stimmel*, 327
Extravascular fluid: Blood and, exchange rates, *Merrell, Gellhorn, and Flexner*, 83
Sodium, blood and, exchange, *Merrell, Gellhorn, and Flexner*, 83

F

Fat(s): Abdominal, α-tocopherol deposition and storage, *Lundberg, Barnes, Clausen, and Burr*, 265
Fatty acid(s): Oxidation, mechanism, *Weinhouse, Medes, and Floyd*, 689
Peanut oil, *Wikoff, Kaplan, and Berman*, 227
Synthesis from carbohydrate precursors, thiamine effect, *Bozer and Stetten*, 607
Ferrohemoglobin: Ionic strength valence, *Barnard*, 91
Fetus: Carbonylhemoglobin, sedimentation constants and electrophoretic mobilities, *Andersch, Wilson, and Menten*, 301
— solubility, *Wyman, Rafferty, and Ingalls*, 275
Ficin: Activation, *Winnick, Cone, and Greenberg*, 465
Folic acid: Diet essential, guinea pig, *Woolley and Sprince*, 687
Vitamin B_{10} relation, *Briggs, Luckey, Elvehjem, and Hart*, 423
— B_{11} relation, *Briggs, Luckey, Elvehjem, and Hart*, 423
Fructose: Oxidation, brain, *in vitro*, *Klein*, 295

G

Globulin: α-, blood serum, normal and hypophysectomized rats, *Moore, Levin, and Leathem*, 349
Glucose: Determination, Somogyi, photometric, *Nelson*, 375
Glucuronic acid: Synthesis, liver glycogen, relation, *Dziewiatkowski and Lewis*, 49
Glutamic acid: Nicotanamide isolation, *Bovarnick*, 1
Proteins, determination, *Olcott*, 71
Glutathione: *Neisseria gonorrhoeae* growth, effect, *Gould*, 143
Glycogen: Liver, glucuronic acid synthesis, relation, *Dziewiatkowski and Lewis*, 49
Goitrogenic substance(s): Iodide, inorganic, conversion *in vitro* to thyroxine and diiodotyrosine, thyroid, effect, radioactive iodine as indicator, *Franklin, Chaikoff, and Lerner*, 151
Gonadotropin(s): Denaturation, urea effect, *Bischoff*, 31
Gonorrhea: *See also Neisseria gonorrhoeae*
Growth: *Neisseria gonorrhoeae*, glutathione effect, *Gould*, 143
Neurospora, pyrimidine nucleosides and nucleotides, effect, *Loring and Pierce*, 61
Pneumococcus, choline effect, *Badger*, 183
Guinea pig: Folic acid, diet essential, *Woolley and Sprince*, 687

H

Heart: Cardiolipin, acid, preparation and properties, *Pangborn*, 343
Hemoglobin: Carbonyl-, adult and fetal, sedimentation constants and electrophoretic mobilities, *Andersch, Wilson, and Menten*, 301
—, — — —, solubility, *Wyman, Rafferty, and Ingalls*, 275
Ferro-, ionic strength valence, *Barnard*, 91
Hemorrhage: Kidney, choline effect, *Patterson, Keevil, and McHenry*, 489
Sweet clover disease, *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link*, 5

Hydrazine: Phenyl-, anemia, *Cartwright, Wintrobe, and Humphreys,* 171
Tissue proteins, effect, *Louis and Lewis,* 381
Hydroxy-α-amino acid(s): N-, α-amino acid degradation, *Steiger* 691
Hydroxycoumarin group: 4-, anticoagulant, activity and chemical constitution, *Overman, Stahmann, Huebner, Sullivan, Spero, Doherty, Ikawa, Graf, Roseman, and Link,* 5
Hypophysectomy: Blood serum α-globulin, effect, *Moore, Levin, and Leathem,* 349

I

Inanition: Tissue proteins, effect, *Louis and Lewis,* 381
Influenza: Viruses, chemistry, *Taylor,* 675
Intestine: Mucosa, peptidases, *Smith and Bergmann,* 627
Phosphatase, castration and testosterone propionate effect, *Kochakian and Fox,* 669
Iodide: Inorganic, thyroxine and diiodotyrosine conversion relation, *in vitro,* goitrogenic substances, effect, radioactive iodine as indicator, *Franklin, Chaikoff, and Lerner,* 151
Iodination: Biological, Schardinger enzyme, *Keston,* 335
Iodine: Protein-bound, blood serum, determination, colorimetric, *Talbot, Butler, Saltzman, and Rodriguez,* 479
Radioactive, inorganic iodide conversion to thyroxine and diiodotyrosine, *in vitro,* goitrogenic substances, effect, use as indicator, *Franklin, Chaikoff, and Lerner,* 151

K

Kidney: Hemorrhage, choline effect, *Patterson, Keevil, and McHenry,* 489
Phosphatase, azo dye test, *Menten, Junge, and Green,* 471
—, castration and testosterone propionate effect, *Kochakian and Fox,* 669

L

Leucine: *dl*-, synthetic, purity, *Hegsted and Wardwell,* 167
Lipid(s): Phospho-. *See* Phospholipid
Respiratory tract fluid, *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker,* 435
Lipoxidase: Action, *Balls and Kies,* 337
Liver: Enzymes, butyrate oxidation, *Leloir and Muñoz,* 53
Glycogen, glucuronic acid synthesis, relation, *Dziewiatkowski and Lewis,* 49
Phosphatase, castration and testosterone propionate effect, *Kochakian and Fox,* 669

M

Methylcellulose: Digestive tract, fate, *Machle, Heyroth, and Witherup,* 551
Methylcholanthrene: Carcinogenesis from, epidermal, potassium and calcium, *Suntzeff and Carruthers,* 521
Microorganism(s): Pyrogens, isolation, *Robinson and Flusser,* 529
Mold: *See also Neurospora*
Myokinase: Adenylpyrophosphatase and, relation, *Kalckar,* 355
Myosin: Adenosinetriphosphatase activity, *Ziff and Moore,* 653
Electrophoresis and sedimentation, *Ziff and Moore,* 653

N

Neisseria gonorrhoeae: Growth, glutathione effect, *Gould,* 143
Neurospora: Growth, pyrimidine nucleosides and nucleotides, effect, *Loring and Pierce,* 61
Nicotinamide: Asparagine, isolation, *Bovarnick,* 1
Glutamic acid, isolation, *Bovarnick,* 1
Nicotinic acid: Determination, colorimetric, *Teeri and Shimer,* 307
Ninhydrin: Ammonia determination, α-amino acids, use, *MacFadyen,* 507
Nitrogen: Amino. *See* Amino nitrogen
Isotopic, *l*(—)-proline metabolism, study with, *Stetten and Schoenheimer* 113

Nitrogen—*continued:*
Isotopic, purine metabolism, study with, *Plentl and Schoenheimer*, 203
—, pyrimidine metabolism, study with, *Plentl and Schoenheimer*, 203
Metabolism, interrelationships, *Shemin and Rittenberg*, 401
Respiratory tract fluid, *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker*, 435
Nucleinase: Ribo-, biological material, determination, *Bain and Rusch*, 659
Nucleoside(s): Pyrimidine, *Neurospora* growth, effect, *Loring and Pierce*, 61
Nucleotide(s): Pyrimidine, *Neurospora* growth, effect, *Loring and Pierce*, 61

O

Obituary: Chittenden, Russell Henry, *Lewis*, 339
Octanoic acid: α,γ-Diketo-*n*-, derivatives, synthesis and metabolism, *Lehninger*, 561
—, synthesis and metabolism, *Lehninger*, 561
Oil: Peanut. *See* Peanut oil
Oxidase: *l*-Amino acid, *Proteus vulgaris*, *Stumpf and Green*, 387

P

Peanut oil: Fatty acids, *Wikoff, Kaplan, and Berman*, 227
Penicillin: Determination, turbidimetric, *McMahan*, 249
Peptidase(s): Intestinal mucosa, *Smith and Bergmann*, 627
Perspiration: Vitamins, water-soluble, *Sargent, Robinson, and Johnson*, 285
Phenol: Metabolism *in vitro*, *Bernheim and Bernheim*, 369
Phenylhydrazine: Anemia, *Cartwright, Wintrobe, and Humphreys*, 171
Phosphatase: Adenosinetri-, inactivation, reversible, *Ziff*, 25
—, myosin, *Ziff and Moore*, 653
Adenylpyro-, myokinase acid, relation, *Kalckar*, 355
Intestine, castration and testosterone propionate effect, *Kochakian and Fox*, 669
Phosphatase—*continued:*
Kidney, azo dye test, *Menten, Junge, and Green*, 471
—, castration and testosterone propionate effect, *Kochakian and Fox*, 669
Liver, castration and testosterone propionate effect, *Kochakian and Fox*, 669
Phosphatide(s): Choline turnover, dietary choline effect, *Boxer and Stetten*, 617
Phospholipid(s): Turnover, radioactive phosphorus in study, *Patterson, Keevil, and McHenry*, 489
Phosphorus: Radioactive, phospholipid turnover, use in study, *Patterson, Keevil, and McHenry*, 489
Tissue proteins, effect, *Louis and Lewis*, 381
Phosphorylcholine: Metabolism, *Riley*, 535
Plant: Cystine hydrolysis, *Thomas and Hendricks*, 313
Sulfur fractionation, *Thomas and Hendricks*, 313
Pneumococcus: Growth, choline effect, *Badger*, 183
Potassium: Carcinogenesis, epidermal, methylcholanthrene-induced, *Suntzeff and Carruthers*, 521
Proline: *l*(−)-, metabolism, deuterium in study, *Stetten and Schoenheimer*, 113
—, —, isotopic nitrogen in study, *Stetten and Schoenheimer*, 113
Protein(s): Blood serum, determination, refractive index use, *Sunderman*, 139
-Bound blood serum iodine, determination, colorimetric, *Talbot, Butler, Saltzman, and Rodriguez*, 479
Glutamic acid determination, *Olcott*, 71
Tissue, hydrazine effect, *Louis and Lewis*, 381
—, inanition effect, *Louis and Lewis*, 381
—, phosphorus effect, *Louis and Lewis*, 381

Proteus vulgaris: *l*-Amino acid oxidase, *Stumpf and Green*, 387
Purine(s): Metabolism, isotopic nitrogen in study, *Plentl and Schoenheimer*, 203
Pyridoxine: Deficiency, anemia, *Cartwright, Wintrobe, and Humphreys*, 171
Pyrimidine(s): Metabolism, isotopic nitrogen in study, *Plentl and Schoenheimer*, 203
Nucleosides, *Neurospora* growth, effect, *Loring and Pierce*, 61
Nucleotides, *Neurospora* growth, effect, *Loring and Pierce*, 61
Pyrogen(s): Microorganisms, isolation, *Robinson and Flusser*, 529

R

Respiration: Tissue, *in vitro*, temperature effect, *Fuhrman and Field*, 515
Respiratory tract fluid: Chloride, *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker*, 435
Lipid, *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker*, 435
Nitrogen, *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker*, 435
Sodium, *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker*, 435
Ribonucleinase: Biological material, determination, *Bain and Rusch*, 659

S

Schardinger enzyme: Iodination, biological, *Keston*, 335
Skin: Carcinogenesis, methylcholanthrene-induced, potassium and calcium, *Suntzeff and Carruthers*, 521
Sodium: Blood and extravascular fluid, exchange, *Merrell, Gellhorn, and Flexner*, 83
Respiratory tract fluid, *Boyd, Jackson, MacLachlan, Palmer, Stevens, and Whittaker*, 435
Sulfur: Plant tissue, fractionation, *Thomas and Hendricks*, 313

T

Temperature: Tissue respiration *in vitro*, effect, *Fuhrman and Field*, 515
Testosterone propionate: Phosphatase, kidney, liver, and intestine, effect, *Kochakian and Fox*, 669
Thiamine: Fatty acid synthesis from carbohydrate precursors, effect, *Boxer and Stetten*, 607
Thyroid: Tyrosine and diiodotyrosine from inorganic iodide *in vitro*, goitrogenic substances, effect, radioactive iodine as indicator, *Franklin, Chaikoff, and Lerner*, 151
Thyroxine: Iodide, inorganic, conversion from, *in vitro*, goitrogenic substances, effect, radioactive iodine as indicator, *Franklin, Chaikoff, and Lerner*, 151
Tissue: Respiration, *in vitro*, temperature effect, *Fuhrman and Field*, 515
Toad: Venom, *Deulofeu and Duprat*, 459
Tocopherol: α-, abdominal fat, deposition and storage, *Lundberg, Barnes, Clausen, and Burr*, 265
Tyramine: Metabolism *in vitro*, *Bernheim and Bernheim*, 369
Tyrosine: Diiodo-, iodide, inorganic, conversion from, *in vitro*, goitrogenic substances, effect, radioactive iodine as indicator, *Franklin, Chaikoff, and Lerner*, 151
l-, metabolism *in vitro*, *Bernheim and Bernheim*, 369

U

Urea: Gonadotropin denaturation, effect, *Bischoff*, 31
Uric acid: Urine, determination, uricase use, *Schaffer*, 163
Uricase: Urine uric acid determination, use, *Schaffer*, 163
Urine: Amino nitrogen, determination, copper method, *Albanese and Irby*, 583
Choline determination, microbiological, *Leucke and Pearson*, 259
Uric acid determination, uricase use, *Schaffer*, 163

V

Venom: Toads, *Deulofeu and Duprat*, 459

Virus: Influenza, chemistry, *Taylor*, 675

Vitamin(s): B_1 deficiency, carbohydrate metabolism, effect, *Chesler, Homburger, and Himwich*, 219

B_{10}, folic acid relation, *Briggs, Luckey, Elvehjem, and Hart*, 423

Vitamin(s)—*continued:*

B_{10}, nature, *Briggs, Luckey, Elvehjem, and Hart*, 423

B_{11}, folic acid relation, *Briggs, Luckey, Elvehjem, and Hart*, 423

—, nature, *Briggs, Luckey, Elvehjem, and Hart*, 423

Water-soluble, perspiration, *Sargent, Robinson, and Johnson*, 285